2004 Command and Control Research and Technology Symposium The Power of Information Age Concepts and Technologies

PROTEUS, NEW INSIGHTS FOR A NEW AGE

Authors:

William Waddell, US Army War College Joanne Kim, Naval Post Graduate School Jack Smith, Canadian National Research Council

PROTEUS, NEW INSIGHTS FOR A NEW AGE

Authors:

William O. Waddell Center for Strategic Leadership US Army War College 650 Wright Ave Carlisle PA. 17013

Joanne Kim Cryptologic Innovation Chair Naval Post Graduate School Department of Computer Science 833 Dyer Road Monterey CA 93943-5118

Jack Smith Leader, Office of Technology Foresight National Research Council of Canada Room E 127, M-58, 1500 Montreal Road, Ottawa, K1A 0R6

Proteus, New Insights for a New Age

Abstract

Successful military, intelligence, or private sector planners and visionaries need new insights into what will affect the future. The Proteus concept offers a range of new insights that, when used in the planning process, will assist military, intelligence, and industry leaders in their efforts to prepare for future success on battlefields, in intelligence activities, and within commercial or private sector endeavors. One of the major shifts in warfare in the year 2004 is the move toward non-standard military operations. Despite the OIF success, the objective of winning the peace has not been completely accomplished. The greatest issue in making OIF successful will be whether the asymmetric portion of the operation will be won. It would be advantageous for the US and its Allies to understand various future scenarios with their threats and challenges.

The US military, intelligence community, and government services are in the midst of transformation. Coming from Industrial Age operations and structure they must make the "leap" into the Information Age, and perhaps the next level as well, the Knowledge Age. Private industry is also experiencing the move to information-powered commerce, as service and utility organizations make full usage of computer networks to conduct their business. As these organizations transform, a clear focus on objectives is imperative. Insight becomes critical to the planning process for command and organizational structure, procurement, training and education, and doctrine. Knowing and understanding the opposition in military and intelligence operations is paramount. The construct of Proteus insights and lenses has emerged as applicable to future planning for not only intelligence, but for military planners, for interagency planners, and for (potentially) private sector planners. These lenses are derived from the Proteus team's publication¹ focusing conceptually on 10 insights applied to 5 global scenarios.

This paper will discuss the implications of these new "lenses" in terms of military transformation, information operations, and intelligence; and the concomitant fundamental changes to the planning process for command and organizational structure, procurement, training and education, and doctrine. It will further discuss future opportunities at the national level in terms of security and defense of blood and treasure.

INTRODUCTION

Successful military operations consist of various levels of accomplishment. One level is deterrence, the ability of one force to cause the opposition to choose conflict resolution in an other-than-violent manner. The second and more obvious level of accomplishment is military victory through land, sea, and air combat, causing the opposition to sue for peace, or to capitulate. Another level is a more modern phenomenon known as stability operations or peace-keeping, the attempt of an outside influence to cause the opposing sides to resolve the conflict peacefully. The final and ultimate level of accomplishment is what the US military calls phase 4 operations, the nation building and civil affairs portion of post conflict resolution. As we are witnessing currently in Iraq this final level is indeed the most challenging, as the goal is to change the hearts and minds of the people so that the conflict will truly be resolved, and not

continue to simmer until the next combat phase is reached. For as long as the US military has been involved in these "phase 4" operations there has been a desire to be more successful at them, to be able to win the hearts and minds of the people more effectively and efficiently. Conventional intelligence and the attempts at diplomatically creating democratic governments seem incapable of providing the direction and insight into the conduct of this nation building. For years military and diplomatic planners have looked for new insights, however, there was never a vehicle to provide planners a way of meeting the requirements in this area of warfare. The complexity of all the planes of influence becomes insurmountable in some scenarios, especially with the explosive environmental mixture of the Middle East today. Attempting to come to grips will all the aspects of military, diplomatic, and economic considerations, and developing a succinct and successful plan puts great pressure on planning staffs. Added to the complexity are the phase 4 operational requirements, including civil affairs and nation building for planning staffs to consider. If this complexity is not considered with new insights there will be those critical areas that will be missed.

The US is in a transitional phase in the way it conducts warfare. The search is on for improved insights into future military operations and conflicts. Questions are being asked concerning future opposition, future enemy warfare capabilities, and the transitional effects and technologies that will be required to meet emerging contingencies. The role of information operations has always been important, but is now considered to be a critical element in the conduct of warfare. The use of information in warfare requires an understanding of the opposition, their usage of information, and the ability to manage the perception of the target audience. New insights are required to meet these emerging objectives, especially in the area of perception management. Situational awareness and near perfect intelligence are considered to be requirements in future warfare. Neither of these can be achieved with traditional systems or the current way of doing business, and there is a significant gap in our ability to achieve these critical capabilities for future military operations.

The goal of this paper is to look at the Proteus insights and their relevance to current operations in Iraq, and discuss their significance as the US military heads into transformation.

BACKGROUND

History reveals that as the United States put on the mantle of global leader in the areas of military capabilities and diplomacy in the mid 20th Century it also took on the responsibility of nation building for those states that had been defeated, or who were mired in conflict with either another nation or in civil war. As the US attempted to provide aid and comfort, and to make the changes necessary to ensure the peace, there have been historic difficulties in changing the hearts and minds of the target audience, specifically the leaders and population of the opposing nation. The Marshall Plan after World War II was a large-scale attempt to rebuild the nations that had been devastated by the war, and to win the hearts of the former opposition. While ultimately successful, the process took a long time to mature and work. Considerable efforts by diplomacy and military civil affairs were required for success.

During the decade of the 1990's considerable effort was given to peace keeping and stability operations for developing nations and those who found themselves in civil war. The first of these was Bosnia, where a combined NATO and US force was deployed to assist in the peacekeeping effort in this former Yugoslavian republic. There were (and continue to be) great efforts to solve the conflict, but the hearts and minds of the people were not and have not been changed sufficiently to allow them to accept a new way of being governed. It is apparent that neither the NATO/US force nor the diplomatic efforts really understand the nature of the conflict, and did not really understand (or attempt to understand) the people or their heritage. The focus of the efforts toward a solution of the conflict was the attempt to initiate a democratic society, to get people to get along and live in peace, to meet the social and economic needs of the people. It is apparent by our continued efforts that there is still not a full understanding of all the issues or clarity in regard to the method of achieving some form of lasting success. Further, the attempts at perception management (a psychological operations campaign) did not reach or affect the target audience because the originators used the wrong message or the wrong media, or the campaigns were conducted at the wrong time.

The next attempt at peacekeeping was the Haiti deployment in 1994. In that continuously war-ravaged nation (or so it seems) we continue to attempt to provide stability, as witnessed by the current deployment of US Marines to the island. There are still great civil difficulties, and the search for insights into how to solve the country's problems is a continual process. Although a degree of stability existed for a time, a lasting change to the government was not achieved.

The African nation of Somalia was another attempt at stability operations. It was apparent that we did not understand the depth of the conflict between the people and the leadership clans. The reaction of the people to the deployment of a military force in the area was not sufficiently considered. The ultimate humility of the loss of military personnel and material lead to the withdrawal of the US lead UN force. This operation was revealing as to the extent to which U.S. policy makers and military leaders did not understand what the conflict was all about, nor did they respond to the needs of the people in a successful way.

The last of the "peacekeeping" efforts was the deployment to Kosovo. It became apparent that we had not learned lessons from Bosnia, as the campaign - although touted as a military success - has not been fully effective in bringing peace to the people and rebuilding the war-ravaged nation.

It has often been apparent that many times during these campaigns the diplomatic and military efforts were disjointed, and important insights were not gathered in meeting the needs of the nations, and ultimately the people. Nation (re)building and stability operations remain a difficult, and often disappointing process. Changing a nation from a hostile dictatorship to a stable and friendly governing system is hard work, and requires exceptional insight into the socio-psychological and socio-cultural aspects of the nation in question.

Currently, a large military force in Iraq is attempting to provide stability to a nation that is transitioning from a tyrannical dictatorship to a more democratic form of government. The transitional powers are struggling with the creation and implementation of the underpinnings necessary to sustain democracy in any form. The enormous process of training police and military, establishing judicial systems, and writing and

implementing constitutional protections for the people, is time consuming and requires great flexibility. Insights into how to make a smooth transition are desperately needed.

The transformation effort within the US military is conceptually dependent on information and the implementation of robust Information Operations. information operations are divided into 5 main areas, operations security (OPSEC), psychological operations (PSYOPS), military deception, electronic warfare (EW), and computer network operations (CNO). There are four supporting areas; physical security, information assurance, intelligence, surveillance and reconnaissance (ISR), and command, control, communications, and computers (C4) systems. Lastly there are 3 related activities; public affairs, civil affairs, and counter intelligence. ii Although not fully defined at the Strategic level, and not fully coordinated across the interagency organizations, information operations contain the mechanism to change the hearts and minds of the leadership, and ultimately the population. An important element of Information Operations (here after referred to as IO) is an attempt to alter the perceptions of the leadership and the population of the target audience. Historic attempts to influence populations reflect some success, but most have fallen short in achieving the goals of heart and mind change. It could be argued that the shortfalls have to do with not fully understanding and appreciating the environment or the target audience, with sending the wrong message, at the wrong time, with the wrong medium. New insights were and are needed to ensure a measure of success greater than historic examples. Without these new insights, I believe the transformation process will not proceed at the intensity level being discussed by visionary planners.

A basic underpinning to the emerging transformation strategy is Network Centric Warfare (NCW), and the supporting Operational Net Assessment (ONA). iii The basic requirement to achieve a suitable level of NCW is a high degree of situational awareness. NCW is heavily reliant on information; intelligence gathering, and information dissemination to all levels of the operation, and this high degree of situational awareness is considered critical to success. One of the basic assumptions in achieving success is that there will be near perfect intelligence and a complete assessment of the environment as well as the opposition in any given warfare theater. It can be successfully argued that there are no vehicles currently in the US inventory to assure that near perfect intelligence can be attained, especially in volatile areas of the world with groups of disparate organizations vying for power and influence. Overhead sensors, electronic signal gathering, and other modern methods of extracting intelligence data are not capable of providing insights into the hearts and minds of the people that represent the opposing nation state or organization. While the ONA attempts to gather all sources of information to support theater operations and campaigns, it uses the available intelligence and analysis to attempt to put the pieces together. To be more successful in the intelligence and information analysis process, a new set of insights is needed, providing the analysts a set of lenses with which to view the information and kinetic battlespace.

The Network Centric Warfare construct includes actions in four domains to be effective. These domains include the physical, information, cognitive, and social domains. Three of these domains, information, cognitive, and social require insights into the operating environment, into the decision making process of the opponent, and the social and experiential environment of the opposition group. Near perfect intelligence implies that these domains are understood and accounted for in the intelligence and

information analysis process. There are currently no processes or vehicles with which to look into social or cognitive arenas other than those used during the Cold War. Asymmetric warfare opponents are not constrained in their objectives or motives by the cold war warfighting methodologies. The Geneva Convention holds no water with their methods of conflict. The terrorist mindset, the religious conflicts, the Middle Eastern environment, and other asymmetric factors are not well understood, and therefore not well planned for. Information themes and messages take on a whole new meaning in this terrorist culture, and success in these areas of conflict will require new levels of insight.

PROTEUS INSIGHTS

In the year 1998 a group of intellectuals were brought together by the National Reconnaissance Office to spend time and intellectual capital looking at possible future world scenarios, and compiling a group of necessary and important insights into ways of dealing with future national threats and issues. The project took on the name of "Proteus", looking at insights for and from the year 2020. The resultant book bearing the same name was published by NRO in the year 2000. The project did not take on significant importance right away, but in the wake of the tragedy of 9/11 it resurfaced as an important document in dealing with issues in the Global War on Terrorism, and the shaping of the global security environment. The importance of the work is in the insights; lenses if you would, that provide a potential change in focus in the way the US considers the problems and difficulties in the contemporary world. Instead of looking through the "Cold War" lenses or through a US only set of filters Proteus encourages the user to consider a variety of issues that affect the actions and reactions of people groups and leaders. The insights or lenses represent a group of planning and management tools to assist leaders in many areas of government to establish a new paradigm to face emerging threats; non-state actors, ambiguous operations, unanticipated conflicts, changes to the political and economic environment in the US, etc. The Proteus insights are new lenses for leaders to use to gain a much fuller understanding of the dynamics of future conflict, as well as avenues for consideration for military planning in nontraditional operations.

In order to effectively discuss each of the existing insights it is important to consider the current environment in which the US military finds itself. Nation building in Iraq is a slow process - one that includes a diplomatic focus, force protection issues, mitigation of insurgent and terrorist acts, and the rebuilding of the Iraqi national infrastructure. Equally important is the "message" that we are sending to the Iraqi people, and, in a larger sense the whole Middle Eastern World. The U.S. administrator and the Iraqi Governing Council are proceeding in each of these areas at differing rates of improvement and influence, but there have been roadblocks. Perhaps the biggest challenge is the changing of the hearts and minds of a people who have been under the former Iraqi dictator's oppressive regime for most, if not all, of their lives. Changing the environment where fear ruled and power was maintained by cruelty has not proceeded smoothly or rapidly, even with the demise of Saddam and his sons. The influence of extreme religious fundamentalism, the standing Middle East conflict, and the long-standing differences between Iraqi Kurds, Sunni and Shiite Muslims, create a combination that is potentially explosive. Despite some intelligence reports, analyses,

and assessments of experts stating success in several arenas the coalition partners have not effectively diffused this explosive mixture. Is it possible to solve any of these with the roadmap we have established? Perhaps the use of a new set of lenses to observe the issues would assist in the effort, or at least shed light on what the issues really are.

The following is a list of the current insights in the Proteus initiative. Some can be considered basic, but the impact of all of them together provides the observer a new appreciation of what is going on behind the first look.

- Starlight: Most current intelligence is derived from retrospective insights, however real predictive foresight capacity is turning toward the recognition of need for strategic information from a confluence of multiple planes of influence in time, space, meaning and cyber systems.
- Sanctuary: They can run and they can hide. Information about movements may be more valuable than secrets tied to stable locations, and luminosity may be more important than stature.
- *Small Stuff*: From biotech to nanotech to internet supported infotech appliances and cognitive systems, technologies are converging to create distributed and diverse threats. The world of the small (including cellular or networked organizations) and the relatively autonomous is creating ambiguity and potential threat
- *Veracity*: Truth and knowledge are not as absolute and fixable as previously believed. Empiricism, authentication and revelation may be relative and difficult to determine when viewed in the context of their creation in the dynamic environments able to be modelled by Proteus.
- *Herds*: People and ideas are on the move affecting loyalties and affinities in complex space-time and idea-belief situations. Herds have inherent capacity for malevolence or benevolence, and Proteus can elaborate the distinctions.
- Wealth: It's not just money non-traditional currencies are entering the influence planes and creating substantial shifts in global value. New currencies expressed as capacities for influence can alter strategic positions and create vulnerabilities. Proteus creates perspective upon these complex interactions and transactions and examines prospective impacts.
- *Power:* As values change, the distribution and instruments of power can shift. Power is temporal, dimensional and erode-able in the emerging cellular environment.
- *Bedfellows:* The significance of teaming increases as global complexity is accelerating even where the US is disengaging. Intelligence and security demand agility and new partners internationally in diversified arenas of information, access and alliance.
- Parallel Universe: From networks to cyber realities and avatars, the flows of
 information capability and configurations of prospective threats are becoming
 more extensive as cyberspace assumes new and highly strategic relevance in all
 domains.
- Threat-Opportunity: Watchfulness in all venues is necessary because every threat is someone else's opportunity. Anticipation of threat requires understanding the ecology of the continuum accounting for both the pre-conditions and the manifestation of threat in terms of capacity and technology in context.

Let us take each of these listed insights and apply them to contemporary Iraq:

- Starlight: It is obvious that there are numerous spheres of influence existing simultaneously in Iraq today. Depending on whether one is Shiite, Sunni or Kurd there are issues that affect one's reaction to the situation. Clearly the liberation of the Shiite majority provides them cause to rejoice, while the Sunni minority who previously held positions of power (at least over the remainder of the populous) are perhaps less joyful. The Kurdish people continue to look for recognition while attempting to avoid any possibility of further oppression. Those connected with the former regime have a totally different outlook on the situation. What group obtains or retains the most influence becomes an area or district issue, one that changes depending on what part of Iraq is in Similarly, the reaction to the US military will be completely different depending on each individual's background and beliefs. Add to this mixture the influence of religious fundamentalism, a vehement hatred for the Jews, and propaganda that has labelled the West "the Great Satan," and the view of the situation is altered again. Intelligence analysts must be able to take all of these (and more) contributing factors into account when creating their estimates. Information campaigns focused on the wrong group of people would backfire, and could fuel additional uprisings. Those who plan information campaigns must also take account the focus of the Middle Eastern media and attempt to synchronize their message with international media outlets, with the understanding that all messages, synchronized or not, will be perceived differently by each group.
- Sanctuary: Perhaps more than ever in the history of the United States, those that are dedicated to inflicting casualties on US soldiers abroad have found sanctuary within the local population. Anti-tank weapons hidden in donkey carts and former members of the Saddam Fedayeen are difficult targets for the stability forces. Electronic sensors and overhead imagery cannot provide adequate intelligence to alleviate the threat. Suicide bombers continue to plague the security of US troops, while citizens of Iraq continue to live in fear of terrorism. Can they be flushed out of the existing sanctuary? Perhaps a greater understanding of what the sanctuary is and why it is available could provide additional insights into greater force protection. Additionally, understanding why the terrorists use the tactics they do, and what the overall objectives are, would be of enormous benefit in regard to the security plan for both US troops and the Iraqi people.
- Small stuff: There is a variety of small stuff working in Iraq, most of which is under the radar horizon of the stabilization forces. This can include cell phones and internet technology, chemical and bio munitions in small quantities, and small organizations committed to terror. These small entities can play a large roll in disrupting stability operations. Should small groups of terrorists use cell phones to communicate and coordinate it would be in our best interest to understand their network, without letting them know that we are aware of their vulnerability (as we did with Osama Bin Laden). This lends itself to the additional question of what other "small stuff" is causing large-scale effects, and how can it be countered? Terrorist acts can be small scale and not pack a heavy kinetic punch, but can have large scale effects on the socio-political environment.

An example is the very recent Madrid bombings; although not large in terms of loss of life they did affect a much more significant event - the Spanish elections - where the popular incumbent lost the vote, changing the dynamic of Spanish national support to the global war on terror.

- Veracity: What is the truth about what is going on? What is the truth about the threat of WMD existing in Iraq? What is the truth concerning the deployment of US troops to the stability forces? Depending on what your background and belief system each of these questions can be answered in a different way. The truth, or the perception of the truth gained through the belief system filters causes differing reactions to events as they unfold. Even in the US people are given a steady diet of perceptions of the truth, depending on what media source is chosen for attaining the information. The current political campaign is an example of the "truth" being changed to fit the message. This is the essence of psychological operations; influence the target audience with a "truth" that fits their perception while sending your message. The "truth" to a Shiite in Baghdad would be different from the "truth" to a Sunni. So we must ask that age old question that Pontius Pilate asked Jesus Christ, "What is truth", with the knowledge that the answer would be "it depends".
- Herds: Who is loyal to what? This is not an easily answered question in Iraq there are many causes to be loyal to. One could be loyal to the family while being against the family next door because they are different. Can Shiites and Sunnis be loyal to the same cause? Can all the internal groups in Iraq have a common cause perhaps the ousting of "the Infidel"? Does the Islamic hatred of their Jewish neighbours create a herd mentality? Individuals such as Osama Bin Laden are hoping that is the case. Anyone following the nightly news knows that the leaders of individual organizations and terrorist groups attempt to gather support for their campaign by rallying the masses around a common cause. This is not unique to terrorism the same can be said of US political campaigns. Herds seem to migrate towards media outlets, form quickly when the cameras are rolling, then disperse into non-herds. The effects of such gathering and dispersing of large groups of people can create havoc to the unprepared planner or intelligence analyst.
- Wealth: If there is anywhere on the globe where non traditional currencies play a major role in what is considered to be wealth, it is in the Middle East especially in Iraq. Opportunities to gain influence play heavily for control of the population, especially since the power vacuum created by the demise of Saddam Hussein. Some of the players trying to gain influence in this arena include religious clerics, politicians, terrorists, and even members of the former administration (if that is a word that can be used for the ousted government). Determining the currency (indication of wealth) of the day will be critical to understanding how decisions are made, what the influencing factors are, and how people react. The former head of the UN Weapons search team was recently quoted, saying that none of the scientists in Iraq that "could have" been involved with WMD responded when offered rewards to provide information concerning the location of the WMD. Could it be that the real wealth they were seeking was a guarantee of safety and not the monetary reward offered? Was there another source of wealth that would have

yielded influence in the lives of those scientists? Coalition leadership may not really understand the currency of influence in Iraq, and even if they do ultimately realize what the currency is, they may not ever be able to get their hands on it. Establishing the currency of security could be the first step, but there are major hurdles to overcome in establishing the currency of stability.

- Power: In the minds of US military planners, power equals military might. To someone on the streets of Baghdad it means something entirely different. Depending on what group affiliation that person has it could be in the religious dimension (the sermons of the clerics), it could be the ruling entity of the local government, or the influence of the local power monger, either thug or politician. Power implies the use of some medium to coerce certain actions from others; does military power in Iraq establish that? Are we really missing the concept of the true source of power and influence as we endeavour to rebuild a broken nation? Unless we get our arms around this issue there will not be an effective information campaign to influence the hearts and minds of the population, as people are naturally affected by the source of power that makes the biggest impact in their lives.
- Bedfellows: Brokering deals in the Middle East always conjures up images of smoke filled rooms with a lot of shouting and pushing. However those images are probably far from the truth, as there are a great many brokered deals and affiliations that perhaps never surface for our consideration. Gaining an understanding of who deals with whom would provide great insight into situational analysis, however it must come from inside sources, from those who understand the environment, and from those who know all the players. Some relationships become globally known, and are fed to the media to sell as such. Other more shady relationships become known in the aftermath of incidents or attacks. It behoves US intelligence analysts and Information Operations planners to gather as much information on these relationships as possible, as understanding them will enhance the success of military or information campaigns.
- Parallel Universe: How much business is conducted in Iraq using the Internet? Do they use the virtual environment like Americans do? What is the other side of the coin in business relationships that causes parallel worlds to appear and disappear? All that is seen in Iraq is not all there is to what is going on, there are a wide variety of parallel situations occurring, either on the Internet or some other method of communication. This is historically part of the Middle Eastern intrigue, conducting parallel events while keeping some groups in the dark as to what is happening. Although not reported on the nightly news it is a sure bet that the black market is alive and well for more than just basic necessities.
- Threat-Opportunity: What opportunities are we giving to the terror organizations simply because we refuse to gain an understanding of the Iraq population mindset? We must gain insight into the factors influencing the local population and the emerging governing body in order to truly understand how to shape the future of the nation. Could it be that we are creating other national level vulnerabilities by doing business the US way?

MILITARY AND DIPLOMATIC CONSIDERATIONS FOR THE FUTURE

The current phase 4 (reconstruction) operations that the US is conducting in Iraq are, in some ways, facing obstacles caused by the US mindset toward the problem. The diplomatic focus on the creation of a democratic state, self governed by the will of the majority, with a rule of law created by the legislature, overseen by the judicial system, and enforced by law enforcement teams is a noble objective, but I believe is lacking the foundational structure to make it work. People must be willing to compromise, and be willing to live at peace with their neighbours, while adhering to the established rule of Religious clerics and fundamentalists must support the government, and be a catalyst to the establishment of the rule of law in the democracy. Support to terrorists can not be perceived as acceptable, and the objective of every influential body must be the establishment of the government. Recent historic examples have not been entirely successful, as in the case of Haiti. We must start asking ourselves if there might be a different way of looking at things in order to establish peace in the nation and region. Proteus insights might provide that "different way." By adopting a process of using the Proteus insights to obtain a better understanding of difficult issues, the path might be cleared for effective solutions.

How do the Iraqi people view what is going on? What is the greatest source of power to them? What do they consider to be the currency of wealth and power? What small things can have a large effect, and are there existing relationships that we do not understand? For the military there are other questions, including "how can I make a greater impact into the peace and stability in the region? What measures can be taken to ensure stability and peace, and what are the real issues that affect these areas? What is the truth to a Shiite or Sunni? What are the sources of influential power, and how can the themes and messages of the US become a part of the influence? Having insights into possible answers to these questions could provide strategists with a better understanding of how to formulate their psychological operations plan in order to have the greatest impact on the target audience.

For the intelligence community there are great insights to be gained in pattern recognition, in understanding the herd mentality, and in discovering the true objectives of terror acts. Information could be gleaned from the concepts of "bedfellows" and "sanctuary," providing a more intuitive interpretation of the actions of the opposition. A realization that the perception of the truth (veracity) is different for each organization that has a "dog in the fight" would add another level of understanding to the analysis effort.

Future military and intelligence operations in Iraq can be greatly served with the insights provided by Proteus. Consider the conduct of military campaigns in which planners are able to discern perceptions of truth, sources and spheres of influence, power and wealth, and understand sanctuary and teaming relationships within the target audience and opposition. Not only would non-kinetic (Information) campaigns play out differently and more effectively, but the "Center of Gravity Analysis" conducted by planners would take on a whole new meaning and level of understanding. Instead of campaigns looking like blunt instruments causing great destruction, a new level of symmetry would be developed between the information themes and messages and the use of force to achieve the objective. While the attainment of symmetry between information

and kinetic operations is not a new concept or objective in modern warfare, a greater level of insight into the information arena would be greatly beneficial. Some of the benefits would include better operations security, less loss of life in combat, and a more efficient application of the US themes and messages. Additional benefit is gained during continued phase 4 operations, especially in regard to force and operations security, Civil Affairs, and Public Affairs. More efficient and effective sharing of the themes and messages is possible by a greater understanding of the Proteus insights.

Looking again at the transformation process that the US military is entering, it is evident by the list of insights that Network Centric Warfare, Information Operations, perception management, and the development of the Operational Net Assessment will be enhanced and more effectively enabled with the inclusion of the Proteus insights. While we will still not be able to completely achieve near perfect intelligence, the analysts will be provided a set of lenses that will allow a new focus on the issues, the objectives of the opposition, and the magnitude of problem to be addressed. Analysts will have more tools to identify patterns of behavior, be able to identify unintended consequences of actions more readily, and have an additional level of analytic "tools" in their tool kit. The information campaign, including psychological operations, civil and public affairs, and operations security will be more effective with the new insights that Proteus would add to the reality of the situation. The identified themes and messages would be created by planning teams with a greater understanding of their prospective interpretation by the target audience. Complete situational awareness is more closely achieved because the new set of lenses into the cognitive and social domains of the opposition will provide insights otherwise missed, leading to a more effective information campaign. understanding of areas such as sanctuary, bedfellows, and small stuff will enhance the situational awareness of the total force, and ensure that the appropriate information is rapidly disseminated in the networked environment. In short, the transformation process will at least be enhanced, or perhaps more accurately stated "enabled" by the inclusion of Proteus in the force preparation and training, intelligence analysis, and the development of the ONA. The resulting accuracy and timeliness of information will ultimately provide for greater success in the mission.

The implementation of Proteus to the military planning process will enhance the mission analysis, center of gravity analysis, course of action development processes in joint doctrine. With additional insights into military decision making, the analysis of unintended consequences, and a more effective look at phase 4 operations the military planners will have an additional level of tools in their "kit bag". Campaign plans will contain more in-depth analysis in terms of the broader effects of strategic military objectives, and the fusion between military and diplomatic initiatives will have common goals (as long as both organizations are using the insights).

Long-range considerations require the military services to decide on future procurement. The decisions concerning which weapon systems will be purchased and developed for use in future operations is always difficult and mind bending. Will the usage and implementation of Proteus insights make these choices any less difficult? Certainly in the emerging information age transformation the reliance on network capable platforms will continue to be front burner, however insights into systems that are effective against asymmetric opponents will reveal other procurement requirements or priorities. Training and education requirements for future forces will require an in-depth

understanding of the lenses provided by Proteus. NCO academies, command and staff colleges and the war colleges will need to include the use of Proteus insights into their curriculum, especially in the areas of Information Operations, Network Centric Warfare, Intelligence, Center of Gravity Analysis, and the military decision making process.

CONCLUSIONS/RECOMMENDATIONS

As the US military plunges headlong into transformation preparing for emerging contingency operations, it is apparent that new insights into emerging threats are required to fully prepare for those contingencies. Network Centric Warfare requires that the Operational Net Assessment provide situational awareness, leading to near perfect intelligence. The insights provided by the Proteus initiative are central to the full understanding of the future threat, the natural and threat environment, and systems needed. Instead of the old way of looking at issues through the lens of historic operations, military, intelligence and diplomatic planners will be able to better discern the requirements of emerging operations by obtaining a more accurate "look" at the important issues and areas that are covered in the Proteus insights.

Military operations in the historic American way of warfare are a thing of the past, as potential adversaries readily acknowledge that they are no kinetic match for US forces. Asymmetric warfare and terrorism are the current and emerging realities of warfare, as demonstrated currently in Iraq and in other geographic regions of the world. Wealth, power, teaming relationships, the herd mentality, and the perception of the truth are areas that US planners need to have a better understanding of in order to prepare for current and future endeavors. Perhaps the most important of all insights is that of "starlight", the ability to visualize differences in perception from differing points of view. For the US to continue to look at issues through the historic and cold war set of lenses could be militarily disappointing - not only for future warfare but also for current concerns. We must get past the "hubris" of being the "biggest and baddest", and look at conflict through the eyes of our opponents, or at least be willing to accept that there are different perceptions of what success in military operations is. Proteus lenses will provide the vehicle for the paradigm shift required to achieve this level of understanding.

In the field of intelligence - where Proteus makes its biggest mark - analysts will have a new set of filters with which to make their projections. Seeing the field of the opposition through lenses that focus on perceptions and belief systems will provide great insight into projected actions and reactions. War has always provided unexpected actions and consequences, especially when the perceptions of the enemy are not fully comprehended. This new set of lenses will be critical in seeing the enemy through his own eyes, taking away some of the unanticipated results that happen when intelligence estimates are based on a US-centric perspective.

The field of Information Operations is an additional recipient of benefit from the usage of Proteus. Since Information Operations are rife with perception management initiatives, such as psychological operations and deception, Proteus provides insights into the effects of the themes and messages, as well as a more realistic viewpoint in which to develop themes. The potential for unintended consequences can be recognized more readily as the planner will have a more effective reference in regard to the effect of the campaigns. Viewing the power of information through the eyes of the receiving audience

provides an additional perspective in the effects of the efforts, and can be a catalyst for success in such campaigns. In the areas that deal with perceptions, those that deal with the hearts and minds of the population are perhaps most critical to success. Public affairs, counter-propaganda, and civil affairs round out those "perception" areas. There is much to be gained in Information Operations by understanding and using the Proteus concepts and insights.

It is the opinion of this author that the military transformation process and the introduction of Network Centric Warfare will only be marginally successful without the implementation of this new set of insights in the creation of the Operational Net Assessment and the required situational awareness. Since much of the success of this future kind of warfare is reliant on the information accuracy and speed of delivery to the appropriate locations, it is apparent that those who develop the assessments must be able to perceive the unintended consequences before the campaign, and not have to react to those consequences after the fact. True situational awareness cannot be attained through traditional analysis, or the use of high tech sensors. Proteus insights are critical elements and tools in order to successfully achieve the transition to NCW.

In order for military planners to be aware of the insights to be gained in the lenses of Proteus the word must get out to those who will be most enabled by them. Military and intelligence education establishments need to include academics on Proteus, including the power of the insights in planning, in center of gravity analysis, in the development of the operational net assessments, and their enabling effects of network centric warfare. Elective courses and interactive exercises need to energize students with the power of this new set of lenses. The developing Proteus media needs to be packaged and implemented in schoolhouse exercises and elective courses, as well as established in Theater Planning cells and the Joint Staff. Implementation across the spectrum of the interagency, from the NSC to State Department would provide all levels of decision maker a new set of lenses to consider in diplomatic, economic, and information elements of national power. The Proteus consortium, with representation from the Naval Post Graduate School, the Army War College, the Canadian National Research Council, the National Geospacial Agency, the National Security Agency and Central Intelligence Agency, and the National Reconnaissance Office are in the process of "getting the word out", with the development of an interactive Proteus media (simulation system) that will provide leaders with a "hands on" experience of the power of Proteus. Additionally the Army War College is establishing an elective program, using the Proteus media to provide students with access to the insights and scenario driven exercises. Future plans include distributed access to scenarios that will provide collaboration capabilities at other military education institutions. Ultimately the desire of the consortium is to empower our national leaders with insights that will make a difference in our national decision making process.

-

¹ Krause, P.H. et al, <u>Proteus Insights from 2020</u> The Copernicus Institute Press, November 2000

ii Joint Publication 3-13, Information Operations,

iii Alberts, David et al, Network Centric Warfare, Developing and Leveraging Information Superiority CCRP Press, 1999